

Encoretm 3
Encoretm 3N
Portable Printer

User's Manual



Zebra Technologies Corporation

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WARNING: Exposure to Radio Frequency radiation. To conform to FCC RF exposure requirements this device shall be used in accordance with the operating conditions and instructions listed in this manual. This will vary depending on which radio is installed.

See pages O-24 and O-25 for warning information specific to the radio.

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CONTENTS

Introduction	O-1
Printer Specifications	O-2
Physical	O-2
Environmental	O-2
Printing Characteristics	O-2
Communications Interface	O-2
Communications Protocol	O-3
Pin Assignments	O-3
Media Type	O-4
Media Handling	O-4
Software Features	O-4
Formats	O-5
Accessories and Options	O-5
Power	O-5
Controls	O-6
Keypad Functions	O-6
Self Test	O-6
Batteries and Charging	O-7
Removing and Replacing Batteries	O-7
Battery Conditioning	O-7
Chargers	O-8
Low Battery Shutdown	O-9
Battery Safety Warnings	O-9
Installation of Media Using Peeler	O-11
Installation of Media Without Peeler	O-13
Troubleshooting	O-14
Maintenance	O-17
Cleaning The Print Head	O-17
Cleaning The Platen	O-18
Cleaning The Peeler Roller:	O-19
Cleaning Sensors	O-19
Linerless Printers	O-19
Communicating to the Printer	O-20
Cable Communications	O-21
IR Communications	O-21
Bluetooth™ Networking Overview	O-22
Wireless Local Area Network (LAN)	O-24

continued on next page

APPENDIX A

Interface Cables A-1

APPENDIX B

Media Supplies A-4

APPENDIX C

Maintenance Supplies A-5

APPENDIX D

Product Support A-6

Patent Information..... inside back cover

Operation Section

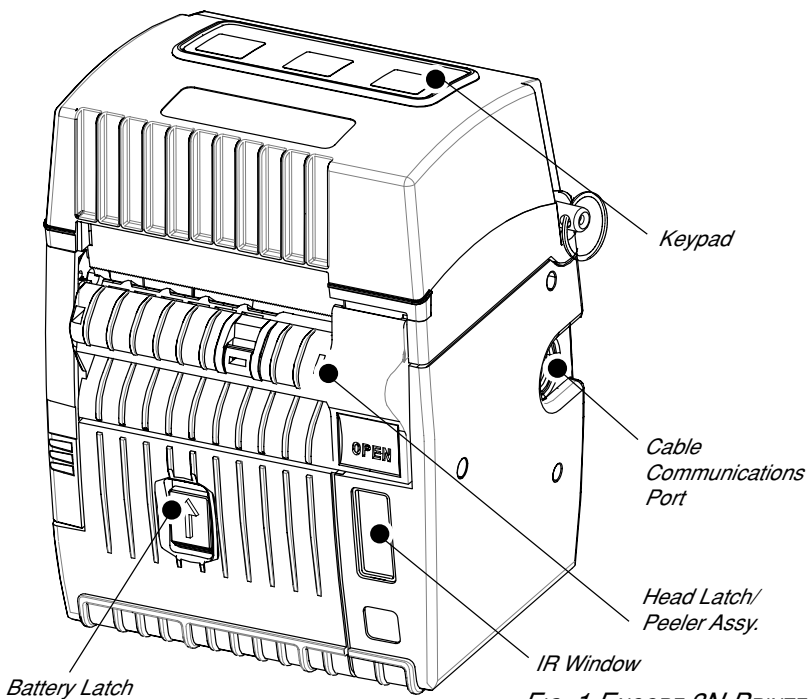


FIG. 1 ENCORE 3N PRINTER

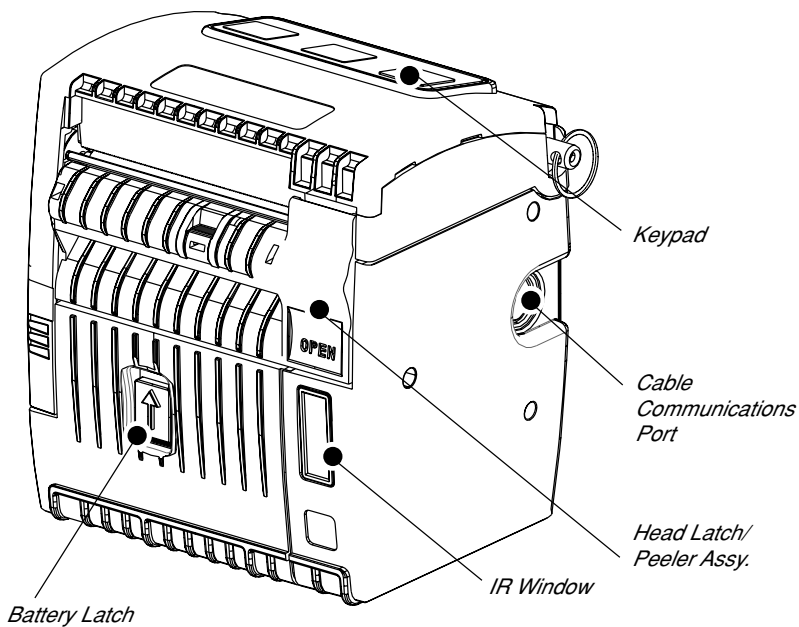


FIG. 1A ENCORE 3 PRINTER

INTRODUCTION

The Encore™ 3 Portable Printer utilizes the latest in direct thermal printing technology. This product is designed for portable printing and is ideally suited to print shelf labels, tickets, price change stickers, receipts, linerless labels and any other mobile applications where printing is required on-site.

The Encore 3N Network Printer in addition offers the ability to be integrated into a wireless LAN environment.

Integrated battery status and hardware diagnostics circuits, as well as its extremely small size, make the Encore 3 ideal for mobile printing. Some models of the Encore 3 offer wireless communications options such as Bluetooth™ or infrared (IrDA) interfaces.

This manual should be read in its entirety before attempting operation of this product. Further information regarding this printer's features and operation can be found in the Mobile Printing Systems Programming Manual available on diskette as Zebra p/n DISK-PTRPRO-MAN or on-line at our website at:

<http://www.zebra.com/SS/manuals.htm>

PRINTER SPECIFICATIONS

Physical

	Encore 3	Encore 3N
Height:	5.6" (142 mm)	6.8" (173 mm)
Width:	5.0" (127 mm)	5.0" (127 mm)
Depth:	4.00" (102 mm)	4.00" (102 mm)
Weight:	2.25 lbs. (1.02 kg)	2.75 lbs. (1.25 kg)
	(without stock)	

Environmental

Operating temperature: 14° to 104°F (-10° to 40°C)

Storage temperature: -4° to 140°F (-20° to 60°C)

Relative humidity: 95% non-condensing

- Automatic head temperature compensation while printing.
- Protection circuitry prevents damage from excessive print head temperatures.

Printing Characteristics

Print Head Life: (estimated)	1,964,160" (nominal) (50 Km)
Technology:	Direct Thermal
Print Speed:	2-3 IPS (50.8-76.2 mm)
Print Head Width:	3" (76.2 mm)
Print Head Density:	203 DPI (8 dots/mm)
Number of Dots:	576

Communications Interface

- Built-in RS-232 port for one-way or two-way communication to terminal or other host up to 19.2K BPS.
- The Encore 3 with wireless options offers in addition: Infrared communications via IrDA specifications, or Bluetooth™ protocol.
- Encore 3N offers a 2.4 GHz frequency hopping spread spectrum radio module which meets communications standard 802.11 Compliant at 1 Mbps to 2 Mbps.

Communications Protocol

The Encore 3 supports RTS/CTS (hardware) and XON/XOFF handshaking protocols to synchronize with the host terminal. The handshaking protocol and the baud rate is programmable. The default cable communications parameters are:

Handshaking = RTS/CTS

Baud Rate = 19,200

Parity = None

Data Bits = 8

Stop Bits = 1

Pin Assignments

The following are the pin assignments for the 8-pin DIN RS232C serial connector.

Pin	Name	Signal Type	Signal Description
1	RXD	input	Receive Data
2	TXD	output	Transmit Data
3	CTS	input	Clear To Send from host
4	RTS	output	Request To Send set high when printer is ready to accept command /data
5	GND		Ground
6	NC		No Connect
7	DSR	input	Data Set Ready low to high transition turns printer on, high to low transition turns printer off
8	DTR	output	Data Terminal Ready set high when printer is on (set to battery voltage for "S" versions)

Media Type

- Paper Labels
- Synthetic Labels
- Plain paper
- Tags
- Two-part thermal receipts
- Linerless labels (on linerless models only)

Media Handling

Media Width: Max. 3.125" (79.3 mm)

Min. 1.5" (38.1 mm)

Maximum Print Width: 2.8" (71.1 mm)

Media Core Size: .75" (19 mm)

1.37" (31.8 mm) optional

- Adjustable stock width
- Easy stock loading system
- Automatic label peeler
- Optional label present sensor

Software Features

- Vertical or horizontal printing
- Left, right, or center justification
- Scale to fit
- Concatenation
- Line print mode
- Programmable label odometer with on-demand terminal reporting
- Serial number reporting to terminal on demand
- Automatic print head temperature and battery compensation
- Programmable inactivity shut-off
- Out of paper/head-up error LED indicator

- Power On/Off from terminal or built-in keypad
- Black bar/gap sensing

Formats

- 25 Resident fonts
- Standard international character sets
- Flash memory for down-loadable programs, label formats, fonts and graphics
- Fully scalable fonts
- Built-in graphics support

Accessories and Options

- Single-bay battery fast charger/conditioner
- Four battery pack fast charger/conditioner
- Extra NiMH battery
- Belt holster and shoulder strap options
- Variety of interface cables
- IrDA Option
- Bluetooth™ wireless interface option

Power

The Encore 3 utilizes a removable battery. If not connected to a terminal with DTR present, the Encore 3 will automatically power off to conserve battery life. The time-out value can be programmed from the host terminal; the factory default time-out is two minutes.

Additional power features include:

- Removable NiMH battery
- Full charge can print 2000 typical labels
- Low battery indicated by flashing LED and reported to terminal on demand
- Power on/off controlled from terminal or built-in keypad

CONTROLS

Keypad Functions

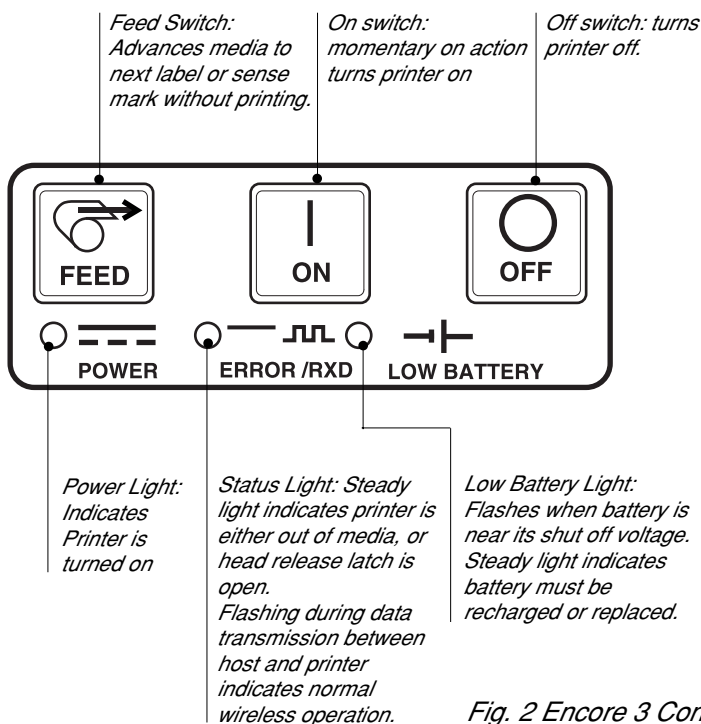


Fig. 2 Encore 3 Controls

Self Test

The Encore 3 can perform a self test which will print a line of interlocking "x" characters to insure all elements of the print head are working, and then print out the version of software loaded in the printer. Refer to the Troubleshooting section for more details on interpreting the self-test.

The self test is activated by the following key sequence:

1. Press the "FEED" key
2. While still holding down the "FEED" key, turn on the printer by pressing and releasing the "ON" key.
3. Release the "FEED" key

The Encore 3 will remain on after running the self test.

BATTERIES AND CHARGING

Removing and Replacing Batteries

Refer to Figure 3 below

Batteries are removed from the Encore 3 by the following procedure:

- 1.Face the front of the printer. Push the battery release button on the right side of the printer towards the top of the printer.
- 2.Firmly slide the battery pack out of the printer until it is clear while still keeping the battery release button raised.

Batteries are replaced by the following procedure:

- 1.Align the battery pack to the printer so that the charger jack faces out.
- 2.Slide the pack into the printer.
- 3.The battery will engage with a distinct “click”.

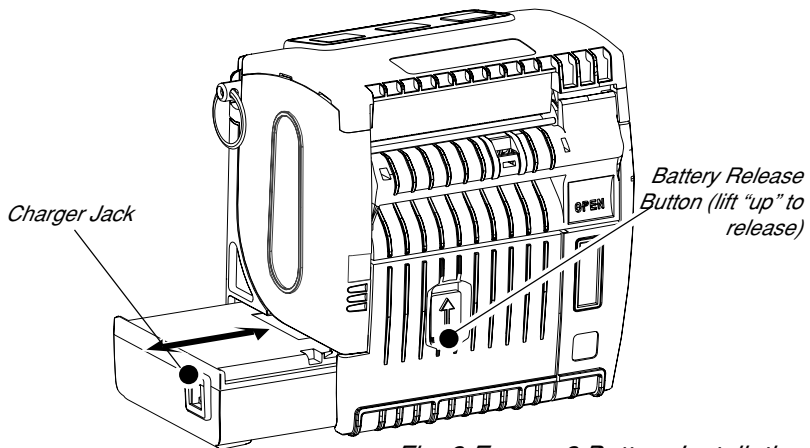


Fig. 3 Encore 3 Battery Installation

Battery Conditioning



IMPORTANT: *Encore 3 batteries must be cycled several times before maximum capacity is realized.*

A battery is cycled by fully charging, then fully discharging it through normal use.

Chargers

Listed below are the specifications for the Encore 3 chargers:

UCN72-4: (p/n series AC15482-tab)

(Part numbers will vary depending on specific country of use. Consult factory for complete part numbers.)

This unit is designed to charge up to four batteries simultaneously. Battery packs may be charged separately or while plugged into the printer. Typical charge time is 90 minutes. Switch selectable 110/220 V.A.C. input voltage. Supplied with line cords compatible with most international standards.

Do not attempt to charge batteries while printing. Attempting to print while charging batteries with the UCN72-4 Charger can result in unreliable charging.

UCN72: (p/n series AT15244-tab)

(Part numbers will vary depending on specific country of use. Consult factory for complete part numbers.)

UC72N is a wall mounted single charger with universal 110 to 230, 50-60 Hz. VAC input. Multiple plug configurations comply with most international standards.

Do not attempt to charge batteries while printing. Attempting to print while charging batteries can result in unreliable charging.

Low Battery Shutdown

The Encore 3 monitors battery charge level in software and will cause the Power LED to flash as the batteries become depleted. The printer should be shut off and the battery pack recharged. The printer will automatically shut itself off if the batteries become severely discharged.



The optional real time clock will maintain its settings for approximately fifteen minutes while batteries are being replaced.



Battery Safety Warnings

Battery terminals are recessed to prevent accidental short circuiting of the battery. Allowing these terminals to contact conductive material will create a short circuit which could cause burns and other injuries or could start a fire.

Use of any charger not approved specifically by Zebra for use with Encore NiMH batteries could cause damage to the battery pack or the printer and will void the warranty.

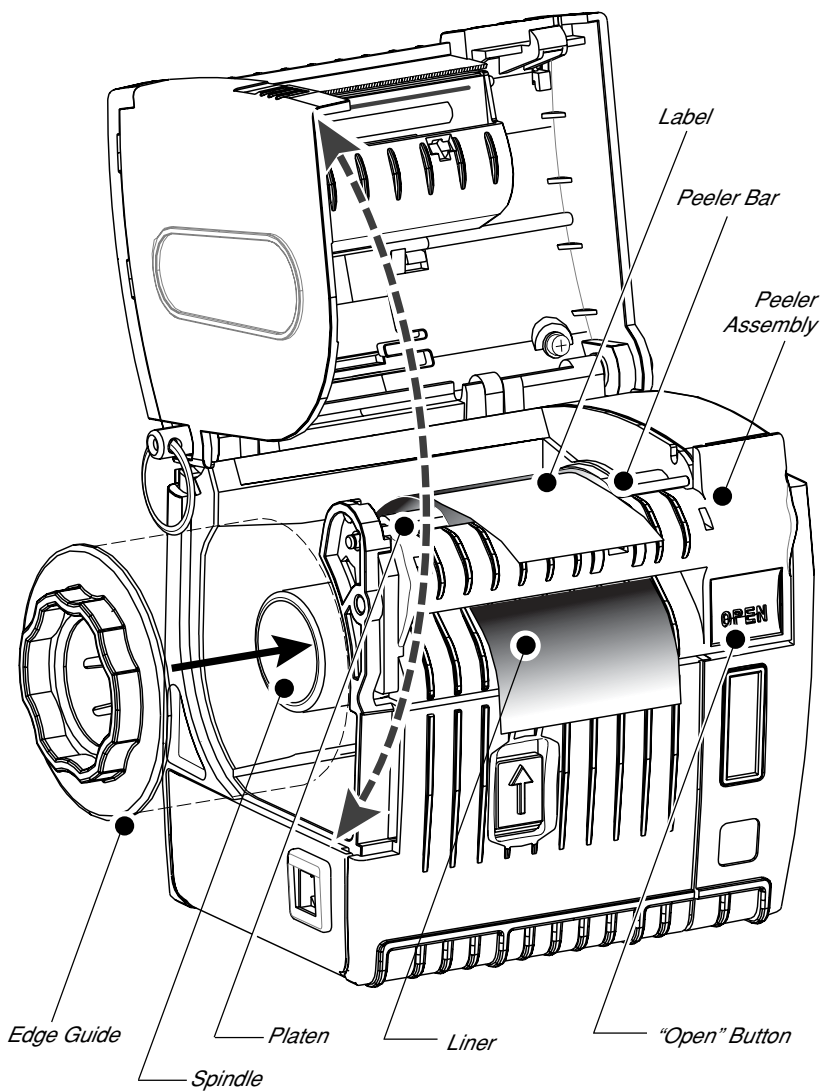


Fig. 4 Media Installation: Peeler in use

INSTALLATION OF MEDIA USING PEELER

The Encore 3 can be specified to print and separate labels automatically using a built in label peeler. The following details media installation when using the label peeler feature.

Peeler in use (Do not use the label peeler when printing a batch quantity of labels*)

1. Turn unit off.
2. Press and hold the “Open” button on the front of the unit. Rotate the top back to reveal the paper compartment
3. Remove the edge guide and any media remaining in the printer. Install the paper roll on the spindle. Roll should be against the inside wall of the paper compartment.
4. Lead the free end over the rubber roller (platen). Paper should feed from the top of the paper roll.
5. Lift peeler assembly by depressing “Open” button on front of unit. Lead edge of stock over the peeler bar and under the grooved peeler roller. Stock should emerge from the slot in the front cover.
6. Slide the edge guide back over the spindle and against the roll of media.
7. Close the top and insure it is securely latched before beginning to print. Insure labels feed over the peeler bar. When labels are printed, they will feed out the top slot in the front of the printer and the liner will feed out the bottom slot as shown.

Units equipped with optional label presence sensor: If the sensor is activated, further printing will be inhibited until the most recently printed and separated label is removed.

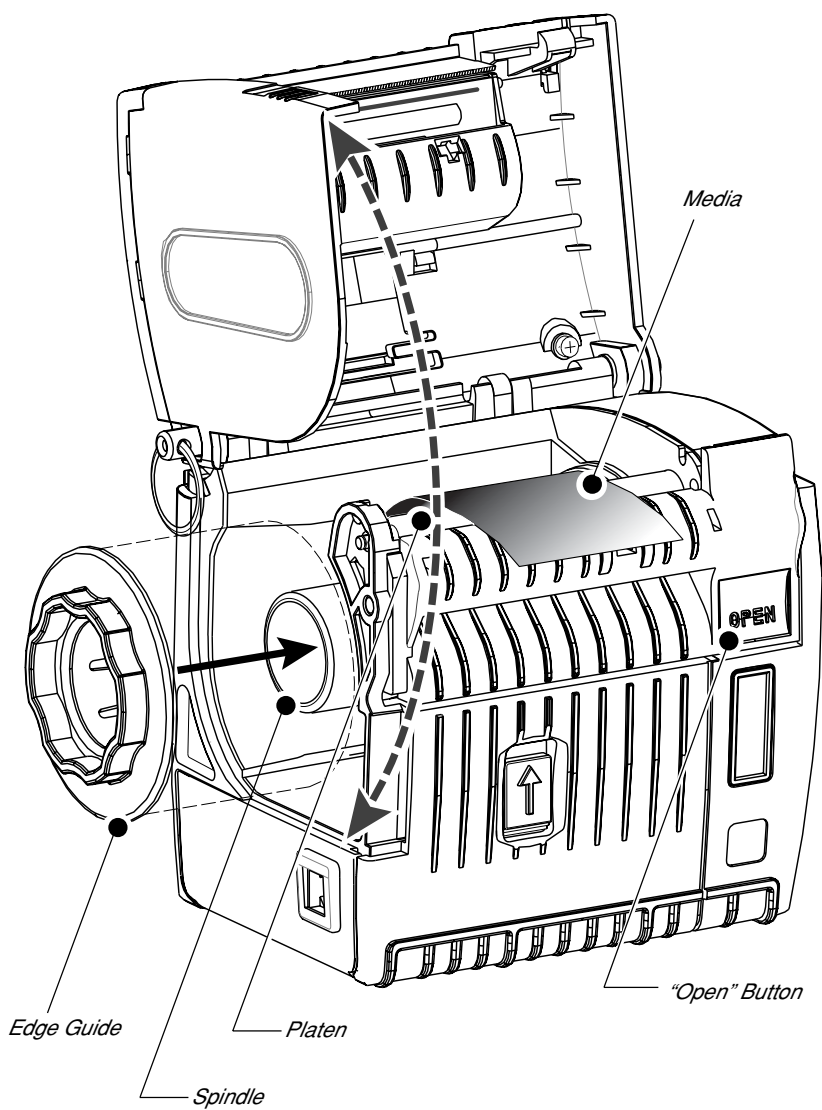


Fig. 5 Media Installation: Peeler not in use

INSTALLATION OF MEDIA WITHOUT PEELER

The Encore 3 can print on conventional journal stock or print continuous batches of labels without using the peeler. The following details media installation for units not equipped with a peeler or when use of the peeler is not desired.

Peeler not in use (Journal, linerless, or batch quantities of labels)

1. Turn unit off.
2. Press and hold the “Open” button on the front of the unit. Rotate the top back to reveal the paper compartment
3. Remove the edge guide and install the paper roll on the spindle. Lead the free end over the rubber roller (platen). Paper should feed from the top of the paper roll.
4. Slide the edge guide back over the spindle and against the roll of media. Roll should be against the inside wall of the paper compartment.
5. Close the top and insure it is securely latched before beginning to print.

TROUBLESHOOTING

Self Test: Perform the self test as described in the Controls section. Unit should print a line of interlocking “x” characters and two reports. The first report indicates model, ROM version, serial number, baud rate, etc. The second report contains application information. If no second report appears, there is no application loaded.

Problem

Corrective Action

No power

- a) Check battery, recharge or replace as necessary.

Media does feed:

- a) Be sure print head is not closed and latched.
- b) Check spindle holding media for any binding.
- c) If unit is equipped with label presence sensor: Insure most recently printed label is removed. Also insure label sensor is not blocked.

Poor or faded print:

- a) Clean print head.
- b) Check battery/replace.
- c) Check quality of media.

Partial/missing print:

- a) Check media alignment
- b) Clean print head.
- c) Insure printhead is properly closed and latched.

Garbled print:

- a) Check baud rate.

No print:

- a) Check baud rate
- b) Replace battery

Problem**Corrective Action**

No print (continued)

- c) Check cable to terminal
- d) Invalid label format or command structure — use Hex Dump Mode for troubleshooting.

Reduced battery life after charging:

- a) Check battery date code — if one to two years old, short life may be normal aging.
- b) Recondition battery.
- c) Replace battery.

Error light flashing:

- a) No application: reload program.
- b) If using wireless communications: normal indication while data is being received.

Error light always on:

- a) Check media is loaded and print head is closed and securely latched.

Skips labels:

- a) Check media for top of form sense mark or label gap.
- b) Check print field has not been exceeded on label.
- c) Insure bar/gap sensor is not blocked or malfunctioning

continued

Problem**Corrective Action**

Communication Error:

- a) Check media is loaded, head is closed and error light is off.
- b) Check baud rate.
- c) Replace cable to terminal.

Label Jam:

- a) Open head release latch.
- b) Generously apply alcohol to printer in area of jammed label.



Never use any sharp objects on printer mechanism as it could damage the print head. Use only the cleaning pen supplied with the printer or a cotton swab saturated with alcohol for cleaning the printer

MAINTENANCE

The Encore 3 will provide reliable service provided a few simple guidelines are followed. The printer should be cleaned periodically (approximately every two weeks), depending on usage and the type of media being employed.

Components of the printer that require periodic maintenance are:

- The print head
- Platen (print roller) on printers configured for lined media only. Linerless printers require no regular maintenance for the platen.
- Label peeler components
- The bar/gap sensor and optional label presence sensor

When cleaning, use only isopropyl alcohol, the same type used in the Cleaning Pen provided with each printer. Always use Zebra brand label or ticket stock for maximum print quality and extended printer life.



Never use any sharp objects on printer mechanism as it could damage the print head and platen. Use only the supplied cleaning pen or a cotton swab saturated with alcohol for cleaning the print head. Always turn the printer off prior to any cleaning operation.

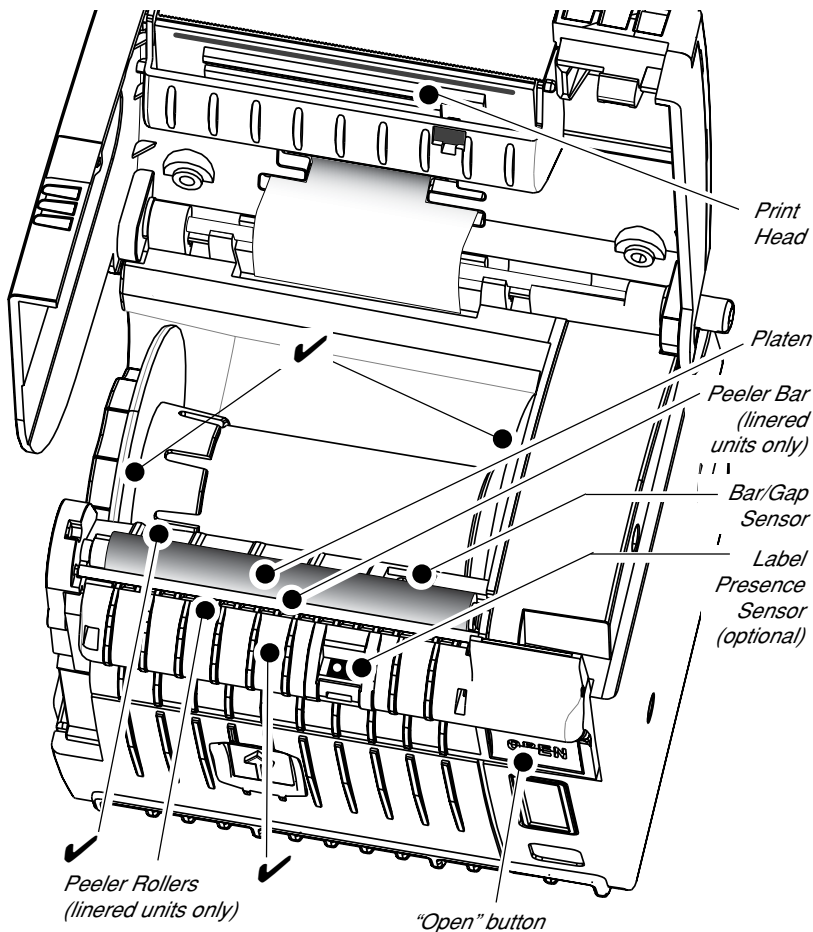
Cleaning the print head

Refer to Figure 6 on pg. O-18

Always turn the printer off prior to any cleaning operation.

- Open the printer by pressing the “Open” button on the front of the unit.
- Swing the print head open.
- Use the cleaning pen supplied with the printer, or alcohol and cotton swabs to clean the surface of the print head, the platen (print roller), the peeler bar and the peeler roller.

continued on next page



Cleaning the platen

Fig. 6 Cleaning the Encore 3

Refer to Figure 6

Applies to printers configured for lined media only

- Open the printer by pressing the "Open" button on the front of the unit.
- Swing the print head open.
- Use the cleaning pen or saturate a cotton swab with alcohol.
- Clean the platen while rotating it to expose the entire surface.

Note: It is not necessary to clean the platen on linerless units. The platen material is self cleaning and will not require constant maintenance.

Cleaning the peeler roller:

Refer to Figure 6 on pg. O-19.

Applies only to units with label peeler option

- Saturate a cotton swab with alcohol. Gently clean the ridges of peeler roller with swab to remove label adhesive residue. Rotate the peeler roller as needed.

Cleaning Sensors

Refer to Figure 6 on pg. O-18

Bar/Gap Sensor:

- The Bar/Gap sensor is located in the right side of the media compartment behind the platen. Blow out any dust deposits carefully, then finish cleaning with a swab saturated in alcohol.

Label Presence Sensor:

- The label presence sensors are located on the outside of the print head. Remove any material blocking the lenses, blow out any dust deposits carefully, then finish cleaning with a swab saturated in alcohol.

Linerless Printers

Refer to Figure 6 on pg. O-18

Printers configured for linerless media require more frequent cleaning. Linerless media deposits adhesive on the printer which must be removed for optimum performance. Linerless printers can be identified by a platen which is *not* black, or by reading the unit's fifteen digit Product Configuration Code (PCC) label on the back of the printer. Digit "8" of the PCC for linerless printers will be a "B", "D", "F", or "H".

Always turn the printer off prior to any cleaning operation.

- Open the printer.
- Remove the media and edge guide
- When cleaning, use only isopropyl alcohol, the same type used in the Cleaning Pen provided with each printer. Surfaces indicated by the ✓ symbol should be cleaned along with:
 - Latch area
 - Area around the Bar/Gap Sensor
 - Printhead
 - Paper spool areas

Allow printer to dry before resuming printing

COMMUNICATING TO THE PRINTER

The printer must establish communications with a host terminal which sends the data to be printed. Communications occur in these basic ways:

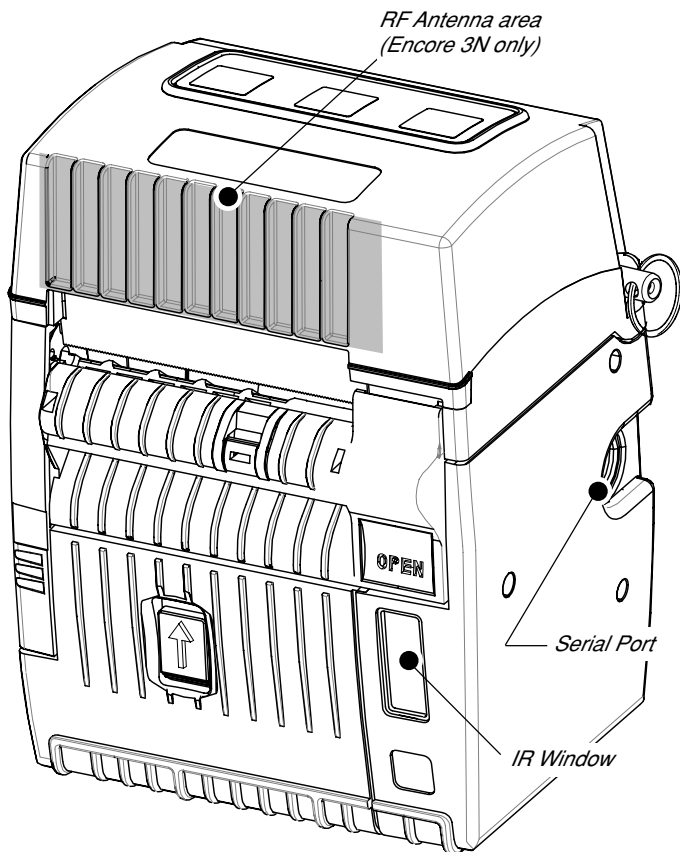


Figure 8: Encore 3 Communication Ports (Encore 3N shown)

- By a cable between the printer and its host terminal
- Infrared (usually by means of the industry standard IrDA protocol). Encore 2 printers with the IrDA option will have a "IR" logo just below the IR window.
- Using Bluetooth™ wireless communications. Encore 2 printers with the Bluetooth option will have a Bluetooth logo just below the IR window.

- By means of a wireless LAN (Local Area Network)
(Encore 3 Network Printers only)

Cable Communications

All Encore 3 printers can communicate by cable; the specific cable supplied with your printer will vary with the host terminal. The 8-pin circular connector on your communications cable plugs into the serial communications port on the side of the Encore 3. It is keyed to assure correct alignment; do not try to force it if it does not plug in. The other end of the cable must be plugged into the host terminal. Refer to pages A-1 through A-3 for more information on the various communications cables offered for the Encore 3.

Communications between the terminal and the printer is controlled by the applications running on the terminal and the printer.

IR Communications

Printers equipped for infrared (IR) communications are identified by a small "IR" logo under the unit's IR window. IR allows wireless communications between the printer and the host terminal. IR units can also communicate with a cable as detailed above, however, IR functions are disabled when the cable is plugged in. Encore 3 units with the IR option can be configured to conform to the standard IrDA communications protocol

Linking a Printer to an IrDA Host

IrDA compliant terminals will automatically initiate communications to the printer. First insure that there is a direct line of sight between the printer and the terminal that will be sending data. The IR window on the front of the Encore 3 must face the corresponding window on the terminal to properly send and receive signals. An IrDA compliant terminal will seek out any linkable devices and establish communications between them, even turning the printer on if necessary.

continued next page

Bluetooth™ Networking Overview

“Bluetooth” is a worldwide standard for the exchange of data between two devices via radio frequencies. Bluetooth radios are relatively low powered to help prevent interference with other devices, limiting the range of a Bluetooth device to about 10 meters (about 32 feet).



Exposure to Radio Frequency Radiation

The radiated output power of this internal wireless radio is far below the FCC radio frequency exposure limits. Nevertheless, this Bluetooth radio must be used in such a manner that the antenna is 2.5 cm or further from the human body.

The radio and antenna are mounted internally in this printer in such a way that, when the printer is used in a standard configuration (belt clip, soft case, shoulder strap), the 2.5 cm distance from the users body will be met. Do not use the printer in an unauthorized manner

The internal wireless radio operates within guidelines found in radio frequency safety standards and recommendations. The level of energy emitted is far less than the electromagnetic energy emitted by wireless devices such as mobile phones.

Each Encore with the Bluetooth option has a unique Bluetooth Device Address (BDA) loaded into its radio module when manufactured.

Bluetooth software runs in the background in order to respond to connection requests, which one device (known as the *master* or the *client*) must request from another. The second device (the *slave* or the *server*) then accepts or rejects the connection. A Bluetooth enabled Encore will always act as a slave device. The miniature network this connection creates is sometimes referred to as a “piconet” and can consist of several Bluetooth enabled devices.

For the most part, communications using the Bluetooth protocol are initiated and processed without any operator intervention, much like the IrDA system described previously.

A Typical Bluetooth Connection Sequence

In this simplified sequence “Joe’s Terminal” is a Bluetooth ready hand held terminal running an application that needs access to a printer.

1. Joe’s Terminal performs a search of its “piconet” (a Device Inquiry) and determines that there are four Bluetooth devices in the vicinity.
2. Joe’s Terminal queries each of the four nearby devices to determine which services they provide (a Service Discovery). The Bluetooth enabled Cameo “Sandy’s Printer” offers the printing service.
3. Joe’s Terminal sends a print connection request to Sandy’s Printer.
4. Sandy’s Printer evaluates the request and determines that Joe’s Terminal is permitted to use the print service, *but only if the correct password is submitted.*
5. Sandy’s Printer queries Joe’s Terminal for the password (Authentication).
6. Joe’s Terminal returns the correct password and the print connection is established.
7. After Joe’s Terminal is finished printing it disconnects with Sandy’s Printer. (Some Bluetooth services disconnect automatically, others must be closed manually.)

There are several layers of security in the Bluetooth system, so this sequence may not be a completely accurate representation of how your printer may function in a Bluetooth environment. For the most part, communications using the Bluetooth protocol are initiated and processed without any operator intervention, much like the IrDA system described previously.

Continued on next page

Wireless Local Area Network (LAN)

Printers equipped for wireless Local Area Network (LAN) communications are known as Encore 3 N Network Printers. Encore 3N printers allow wireless communication as a node within a local area network, and its wireless capabilities allow communications from any point within the LAN's perimeter. Methods of establishing communications to the Encore 3N will vary with each LAN application.

The printer's serial number label on the back of the unit will show the radio module's identification numbers and/or its operating frequency.

Encore 3N printers can be identified by a much higher top cover which contains the radio module and the antenna. The antenna area of an Encore 3N is depicted as the shaded area on Figure 8 of this section. Please refer to the safety considerations below and avoid unnecessary proximity closer than the mandated 1.5 cm distance from this area.

Encore 3N Safety Considerations



Caution: In order to comply with FCC RF exposure requirements maintain a 1.5 cm [.6"] spacing between the front (where the paper exits) of the printer and all parts of the body excluding wrists, hands, ankles and feet. ~~W~~earing the printer with the shoulder strap or the belt clip with the back side of the printer touching the body meets the FCC RF exposure limits as long as the spacing requirement between the front side of the printer and the user is satisfied.

Appendices

APPENDIX A

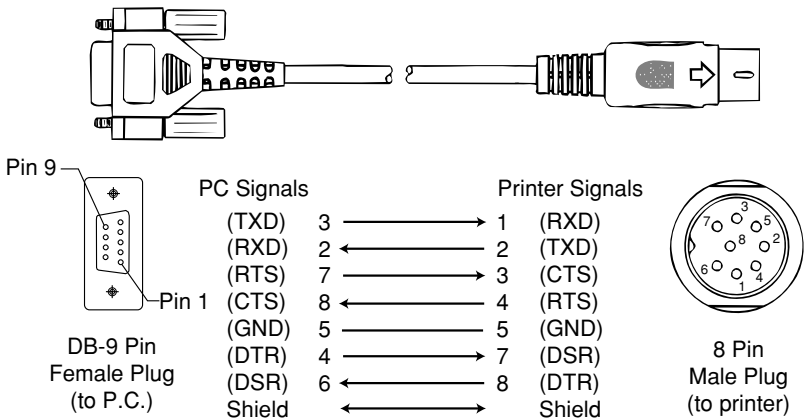
INTERFACE CABLES

Part Number BL11757-000

8-Pin DIN to 9-Pin DB PC Cable

This part is also available as a coiled cable under
Part Number BL15063-1.

For Use With a Personal Computer



APPENDIX A

INTERFACE CABLES

Terminal	Cable Part Number	Cord Lgth/Type	Terminal Connector	Printer Connector	Notes
COMPSEE					
Apex II	BL12093-3	8' Coiled	RJ45	8 Pin DIN	
NORAND					
RT1100/1700 Series	BL11537-1	8' /Coiled	6 Pin MiniDIN	8 Pin DIN Over-molded	
RT1100/1700 Series	BL11537-2	12' /Coiled	6 Pin MiniDIN	8 Pin DIN Over-molded	
RT5900 Series	BL12803-1	8' /Coiled	15 Pin D-Sub	8 Pin DIN	
RT1100/1700 Series	BL12804-1	8' /Coiled	6 Pin MiniDIN	8 Pin DIN -Locking	
RT1100/1700 Series	BL13298-1	8' /Coiled	6 Pin MiniDIN	8 Pin DIN Over-molded	Auto ON/OFF
RT1100/1700 Series	BL13309-1	8' /Coiled	6 Pin Mini DIN	8Pin DIN	Auto ON/OFF
SYMBOL					
PDT3300 Series	BL11391-000	8' /Coiled	DB25 male	8 Pin DIN	Must be used with Symbol RS232
PDT4100 Series	BL11757-000	6' /Straight	9 Pin DB Fem.	8 Pin DIN	Adapter - Symbol PN#25-12059-01
PDT3100/3500 /6100 Series	BL12093-1	8' /Coiled	RJ45	8 Pin DIN	a. Power On/Off (+5V) b. Used for the Percon Falcon
PDT3100 Series	BL12093-2	8' /Coiled	RJ45	8 Pin DIN	Power On/Off (DTR Line)
SPT1700 Series	BL15483-1	9' /Coiled	Cradle	8 Pin DIN	No Power On/Off (DTR Line)
SPT2700 Series	BL15482-1	9' /Coiled	Cradle	8 Pin DIN	Power On/Off (DTR Line)
LRT/LDT3800 Series	CC11371-3	6' /Coiled	PIM Optical	8 Pin DIN	"S" Printers Only
LRT/LDT3800 Series (2 Way)	CC11371-4	6' / Coiled	PIM Optical	8 Pin DIN	"S" Printers Only

APPENDIX A

INTERFACE CABLES (continued)

Terminal	Cable Part Number	Cord Lgth/Type	Terminal Connector	Printer Connector	Notes
SYMBOL (CONT.)					
LRT/LDT3800 & 6800 Series	CC11371-5	6' / Coiled	PIM Optical	8 Pin DIN	"S" Printers Only
TEKLOGIC					
7030 ILR	BL13285-2	Coiled	36 Pin IDC Fem	8 Pin DIN	
7025 ILR	BL13285-1	Coiled	15 Pin DB male	8 Pin DIN	
TELXON					
960	BL11122-1	8' / Coiled	RJ45	8 Pin DIN	
960SL Adapter for BL11122-1	CC13711-1	n/a	n/a	n/a	
960 (BL11122-1) & 960SL (CC13711-1)	CP74005	n/a	n/a	n/a	
960	BL12996-1	8' / Coiled	RJ45	8 Pin DIN-Locking	
860 & 912	CL11314-000	8' / Coiled	DB25	8 Pin DIN	

APPENDIX B

MEDIA SUPPLIES

To insure maximum printer life and consistent print quality and performance for your individual application, it is recommended that only media produced by Zebra be used. These advantages include:

- Consistent quality and reliability of media products.
- Large range of stocked and standard formats.
- In-house custom format design service.
- Large production capacity which services the needs of many large and small media consumers including major retail chains world wide.
- Media products that meet or exceed industry standards.

For more information call Zebra Technologies Corporation at +1.866.230.9495 (U.S., Canada and Mexico) and ask to speak to a Media Sales Representative.

APPENDIX C

MAINTENANCE SUPPLIES

In addition to using quality media provided by Zebra, it is recommended that the print head be cleaned as prescribed in the maintenance section. The following items are available for this purpose:

- Cleaning Pen (10 pack), Reorder No. AN11209-1
(Recommended for use with Bravo™, Cameo™ and Encore™ printers.)
- Cleaning Kit with Cleaning Pen, and Cotton Swabs, Reorder No. AT702-1
(Recommended for use with Bravo™, Cameo™ and Encore™ printers.)

APPENDIX D

PRODUCT SUPPORT

Contact the Help Desk at:

Zebra Technologies Corporation
30 Plan Way
Warwick, Rhode Island 02886-1012 USA
Telephone: +1 401.739.5800
Fax: +1 401.732.7808
e-mail: risupport@zebra.com

In Europe:

Zebra Technologies Europe, Limited
Zebra House
The Valley Centre, Gordon Road
High Wycombe
Buckinghamshire HP13 6EQ, United Kingdom
Telephone: +44 1494 768298
Fax: +44 1494 768210
e-mail: tseurope@zebra.com
Ask for Customer Support

PATENT INFORMATION

This product and/or its use may be covered by one or more of the following US patents and corresponding international patents worldwide

D275,286	5,029,183	5,364,133	5,543,610	6,034,708
D347,021	5,047,617	5,367,151	5,545,889	6,036,383
D389,178	5,103,461	5,372,439	5,552,592	6,057,870
D430,199	5,113,445	5,373,148	5,570,123	6,068,415
D433,702	5,140,144	5,378,882	5,578,810	6,070,805
3,964,673	5,132,709	5,396,053	5,589,680	6,095,704
4,019,676	5,142,550	5,396,055	5,612,531	6,109,801
4,044,946	5,149,950	5,399,846	5,642,666	6,123,471
4,360,798	5,157,687	5,408,081	5,657,066	6,147,767
4,369,361	5,168,148	5,410,139	5,768,991	6,151,037
4,387,297	5,168,149	5,410,140	5,790,162	6,201,255 B1
4,460,120	5,180,904	5,412,198	5,791,796	6,231,253 B1
4,496,831	5,229,591	5,415,482	5,806,993	6,261,009
4,593,186	5,230,088	5,418,812	5,813,343	6,261,013
4,607,156	5,235,167	5,420,411	5,816,718	6,267,521
4,673,805	5,243,655	5,436,440	5,820,279	6,270,072 B1
4,736,095	5,247,162	5,444,231	5,848,848	6,285,845 B1
4,758,717	5,250,791	5,449,891	5,860,753	6,292,595
4,816,660	5,250,792	5,449,893	5,872,585	6,296,032
4,845,350	5,262,627	5,468,949	5,874,980	6,364,550
4,896,026	5,267,800	5,479,000	5,909,233	6,379,058 B1
4,897,532	5,280,163	5,479,002	5,976,720	6,409,401 B1
4,923,281	5,280,164	5,479,441	5,978,004	6,411,397 B1
4,933,538	5,280,498	5,486,057	5,995,128	6,428,227 B2
4,992,717	5,304,786	5,503,483	5,997,193	
5,015,833	5,304,788	5,504,322	6,004,053	
5,017,765	5,321,246	5,528,621	6,010,257	
5,021,641	5,335,170	5,532,469	6,020,906	



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